

## REMARKS

The Office Action dated May 22, 2003 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-15 are pending in the application. Applicant has amended claims 1 and 12 to more particularly point out and distinctly claim the present invention. New claims 14 and 15 are submitted to recite aspects of the invention which were disclosed in the specification, on page 2 lines 25 through 26 as originally filed. No new matter has been added. In view of the following remarks, reconsideration and allowance of these claims are respectfully requested.

### CLAIM REJECTIONS UNDER 35 USC § 103

Claims 1-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McKernan (U.S. Patent No. 5,031,240) in view of Vucetic et al. (U.S. Patent No. 5,819,177). The Office Action alleged that McKernan discloses all of the elements of the claimed invention, with the exception of directing a communication from the mobile station to a predefined trace activation number of tracing facility. The Office Action relied upon Vucetic to allegedly cure the deficiencies of McKernan. Applicant respectfully submits that the prior art cited in the Office Action fails to teach, suggest or disclose the features of the claimed invention. Therefore, the rejection is respectfully traversed and reconsideration is respectfully requested for the reasons which follow.

Claim 1, upon which claims 2-11 are dependent, recites a method of trace activation in a mobile communications system. The mobile stations are in

communication with a mobile communications network. The method includes a step of directing a communication from the mobile station to a predefined trace activation number of a tracing facility. The steps of activating tracing at the tracing facility for the mobile station from which the communication originates and generating a trace report for the mobile station are included in the method.

Claim 12, upon which claims 13 and 15 are dependent, recites a mobile communication system which comprises at least one mobile station, a communications network, and a tracing facility. The communications network is arranged to communicate with the at least one mobile station. The tracing facility traces at least one of the mobile stations. The tracing facility also has a predefined trace activation number for activating tracing of the at least one mobile station in response to a communication from the at least one mobile station to the trace activation number.

As a result of the claimed invention, a system and a method is provided where a trace activation number of a tracing facility, to which a communication from a mobile station is directed, enables the number to be traced automatically. Thus, the invention provides a relative easy and automatic method of trace activation of a mobile station. For example, a maintenance person may control tracing of his mobile station anywhere, where the mobile station has a connection to a mobile communication network. Another advantage of the present invention is that tracing may be activated on-demand, which lessens the demand load on the network. The network does not constantly monitor and trace the mobile station. Instead, the mobile station is traced when a communication

initiated from the mobile station is directed to the trace activation number of a tracing facility. These advantages are not all-inclusive but are merely exemplars of some of the benefits of the invention.

Applicant submits that the prior art fails to disclose or suggest the elements of the invention as set forth in claims 1-15, and thereby fails to provide the critical and nonobvious advantages that are provided by the invention. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claimed limitations. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed combination must be found in the prior art, and not be based on Applicant's disclosure. See M.P.E.P. §§ 2143.01 and 2143.03.

McKernan discloses a method and system for interactive diagnostic system for cellular telephones. By calling a dedicated telephone number, an authorized operator, such as a cellular agent, can contact a computer with voice response capability, which is associated with the electronic mobile exchange (cellular switch). The computer then transmits to the agent a voice prompt requesting a password. Upon correct entry of the password, the computer initiates a trunk trace of the incoming call. The trunk trace identifies the electronic serial number (ESN) and the mobile telephone number (MID) for the telephone used to make the call. The computer reports the data to the calling party, via the cellular network. Having supplied the telephone user or agent with the data, the

computer then prompts the agent to record a voice sample on the system for subsequent re-transmittal to the telephone. By evaluating the re-transmitted voice sample, the agent can evaluate the voice modulation capability of the telephone.

Vucetic discloses a network management method and apparatus for wireless terminals. Digital signal processors (DSP) monitor the operating characteristics of the associated wireless terminals and report those characteristics to a network management computer. The network management computer receives communications from the wireless terminals and takes corrective action for out-of-specification conditions and updates the associated DSPs with corrections and flexible dialing instructions. The network management computer also gathers utilization statistics reported to it by the wireless terminals. The wireless terminals can be initialized by direct connection to the wireless terminal with a telephone instrument or can be initialized over the air by the network management computer.

Applicant submits that the cited references fail to teach or suggest the claims of the invention because McKernan and Vucetic fail to disclose or suggest the step of directing a communication from the mobile station to a predefined trace activation number of tracing facility. According to one embodiment as discussed on page 1, lines 24-29 of the application, the present invention relates to a tracing facility that enables the network to trace the activities of various entities when specific events occur within the system. The tracing facility enables the tracing of all the information that is available to the network concerning the call path. Examples of the type of information that may be

recorded in a trace record includes the identity of the originating and terminating equipment of the subscriber, supplementary services invoked, and all A-interface messages. Furthermore, tracing of the present invention can be used for observing the mobile station and the location of the mobile terminal. Tracing of the present invention can also be used in the evaluation of a new mobile station to confirm network integrity and estimating network quality of service. However, McKernan does not teach or suggest that internal messages of the mobile network can be traced. Furthermore, the Office Action admits that McKernan fails to direct a communication from the mobile station to a predefined trace activation number of a tracing facility.

Rather, McKernan is concerned with monitoring call quality, and discloses a method for obtaining information regarding a mobile station, such as electronic serial number or telephone number of the mobile station for this purpose. McKernan enables the user to run simple performance tests of cellular telephones, such as voice samples which may be recorded and reviewed by the user in order to evaluate the voice modulation features of the mobile station, as discussed in col. 7, lines 20-33 in McKernan. Other call quality examples are provided in col. 2, lines 56-61 in McKernan. Instead of directing a communication from the mobile station to a predefined trace activation number of a tracing facility, McKernan discloses that the user calls a dedicated telephone number and then an authorized operator, such as a cellular agent contacts a computer with voice response capability. The computer then "prompts the agent to

record a voice sample" on the system. By evaluating the re-transmitted voice sample, the agent then evaluates the voice modulation capability of the telephone.

The Office Action relies upon Vucetic to allegedly cure the deficiencies of McKernan. However, Vucetic fails to cure the deficiencies of McKernan. Vucetic, like McKernan, fails to disclose or suggest the step of directing a communication from the mobile station to a predefined trace activation number of a tracing facility. Vucetic, instead, discloses a method for network management for wireless terminals. The method enables the wireless terminal having a digital process to monitor the operating characteristics of the associated wireless terminals and to report those characteristics to a network computer. The network computer may thus take corrective action for out-of specification conditions and it may update the DSP instructions.

The Office Action specifically cites Fig. 3, 4, 5 and col. 6, line 5 through col. 7, lines 35 to allegedly disclose or suggest the feature of directing a communication from the mobile station to a predefined trace activation number of a tracing facility. Applicant respectfully traverses the Office Action's analysis and conclusion of the teaching of Vucetic. In Vucetic, there is neither a disclosure nor suggestion of "predefined trace activation number of a tracing facility." Vucetic merely discloses that there are four main control modes that the DSP must perform: the idle state waiting for an event, call origination, paging and call-in-progress. For example, the wireless terminal begins in an idle state awaiting an off-hook interrupt. When the phone is initiated so that an off-hook interrupt is detected, a dial tone generation is turned on. The DSP 14, within the wireless

terminal, monitors the voice channel to determine whether a call is in progress. When the call is terminated, the voice channel is released and the system is returned to the idle state.

In Vucetic, during the initialization process, the wireless terminal is placed in an off-hook condition. The DSP monitors the user's entries for a specific time period to determine whether the user enters the specific parameters. If the correct parameters are entered, the wireless terminal sends the initialized values of the parameters to the telephone company for verification. If the verification is successful, the initialization process is ended as discussed in col. 7, lines 12 through 17).. However, Vucetic never directs its communication to a predefined trace activation number of a tracing facility where tracing is activated at the tracing facility for the mobile station. Vucetic merely verifies the initialization process. Vucetic does not activate a tracing process in order to record information concerning the call path as recited in the claimed invention.

Since neither McKernan nor Vucetic, taken alone or in combination, discloses or teach the step of directing a communication from the mobile station to a predefined trace activation number of a tracing facility, Applicant respectfully submits that neither McKernan nor Vucetic renders claims 1 and 12 of the claimed invention obvious.

In addition, claims 2-11 and 14 depend from claim 1 and claim 13 and 15 depend from claim 12 and are therefore allowable at least for the reasons claims 1 and 12 are allowable, respectively, and for the specific limitations recited therein.

## CONCLUSION

As discussed above, Applicant submits that certain clear and important distinctions exist between the cited prior art and the claimed invention. Applicant submits that these distinctions are more than sufficient to render the claims of the invention unanticipated by and unobvious in view of the McKernan and Vucetic. It is therefore requested that claims 1-15 be found allowable, and this application passed to issue.

Having addressed each of the foregoing rejections or objections, it is respectfully submitted that this application is now in condition for allowance. Notice to that effect is respectfully requested. Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate Extension of Time. In the event there are any fees due with respect to the filing of this paper, please charge Counsel's Deposit Account 50-2222.

Respectfully submitted,



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